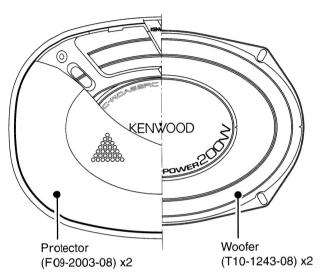
COMPACT POWERED SUB WOOFER

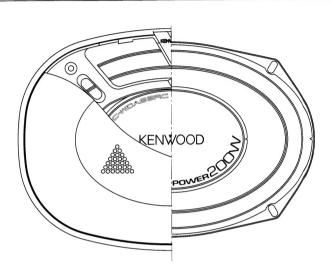
KFC-WDA69RC

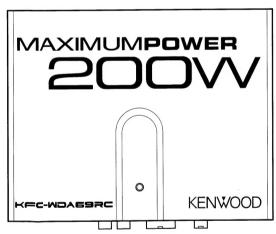
SERVICE MANUAL

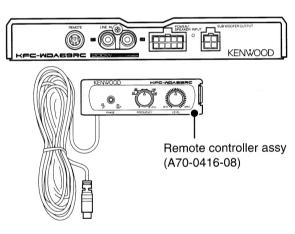
KENWOOD

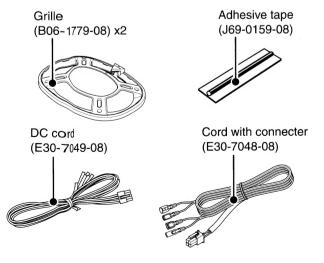
© 2004-2 PRINTED IN JAPAN B53-0137-00 (N) 2704

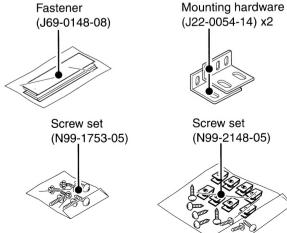


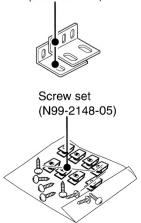






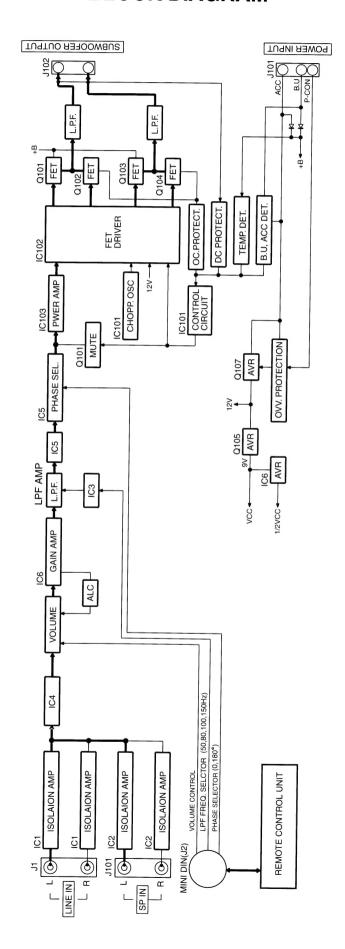








BLOCK DIAGRAM

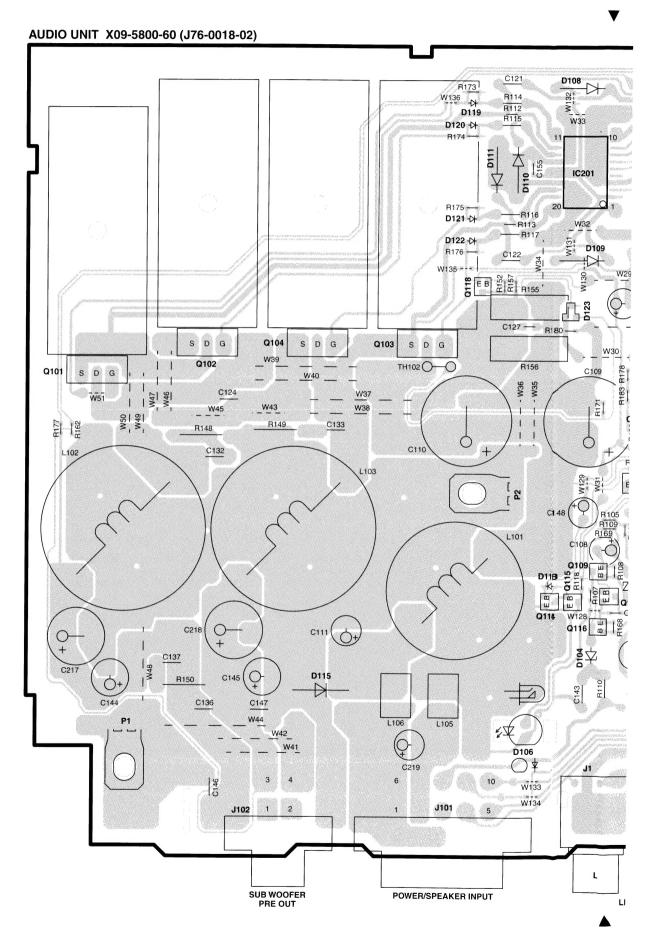


COMPONENTS DESCRIPTION

● AUDIO UNIT (X09-5800-60)

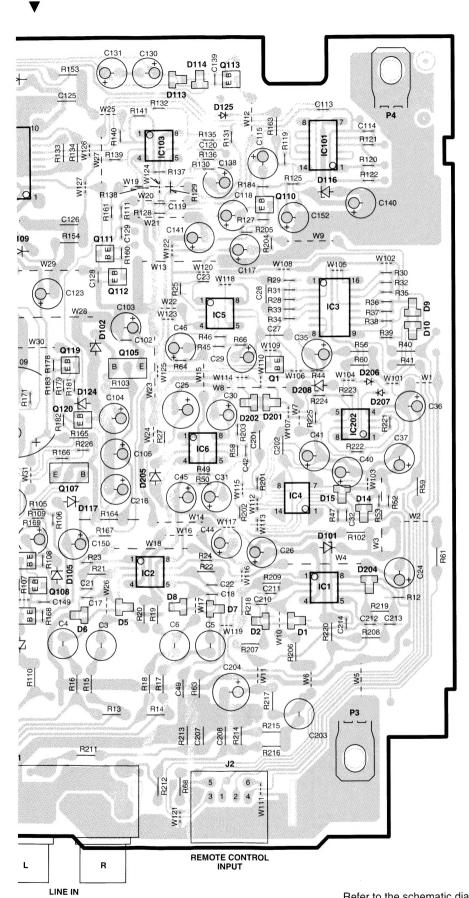
Ref No.	Application / Functions	Operation / Condition / Compatibility
IC1	Line input isolation amp	9V AVR operation (center voltage 4.9V)
IC2	Speaker input isolation amp	9V AVR operation (center voltage 4.9V)
IC3	LPF frequency selector	Select for 50, 80, 100, 150Hz (Default 150Hz)
IC4	Volume control	Electric volume (VCA)
IC5	LPF, phase selector	LPF (-12db/oct.) Phase 0°/180°
IC6	1/2 VCC output OP amp	Center voltage 4.9V
IC101	Chopping wave generator & protection control	Clock 140kHz, protection time (2sec for Power on)
IC103	Power amp first stage, NF circuit	9V AVR operation (center voltage 4.9V)
IC201	D class amp driver	PWM digital converter, FET driver IC
IC202	Clipper circuit	9V AVR operation (center voltage 4.9V)
Q1	Phase selector	Switching for phase 0°and 180°
Q101~104	Power FET	D class AMP final FET
Q105	9V AVR	Use for OP amp
Q107,108	P-CON control	When P-CON line more than 8.7V, this circuit is active (ON)
Q109	Over load voltage detector	When ACC line more than 18.2V, this circuit is active (OFF)
Q110	Muting transistor	Muting for PWM driver when Power is on
Q111,112	Protection detector	Feed back for protection data (latch operation)
Q113	DC protection detector	DC voltage sensibility is ±5V
Q114	LED control	LED light up when Power is ON
Q115	LED control	LED light off when protection circuit ON
Q116	12V AVR control	12V AVR feedback transistor
Q118	Temperature & voltage detector	Protection function
Q119	Power supply voltage detector	Detect for Power off condition
Q120	Discharge transistor (for C148 when Power is off)	Malfunction for LED light up

PC BOARD (FOIL SIDE VIEW)



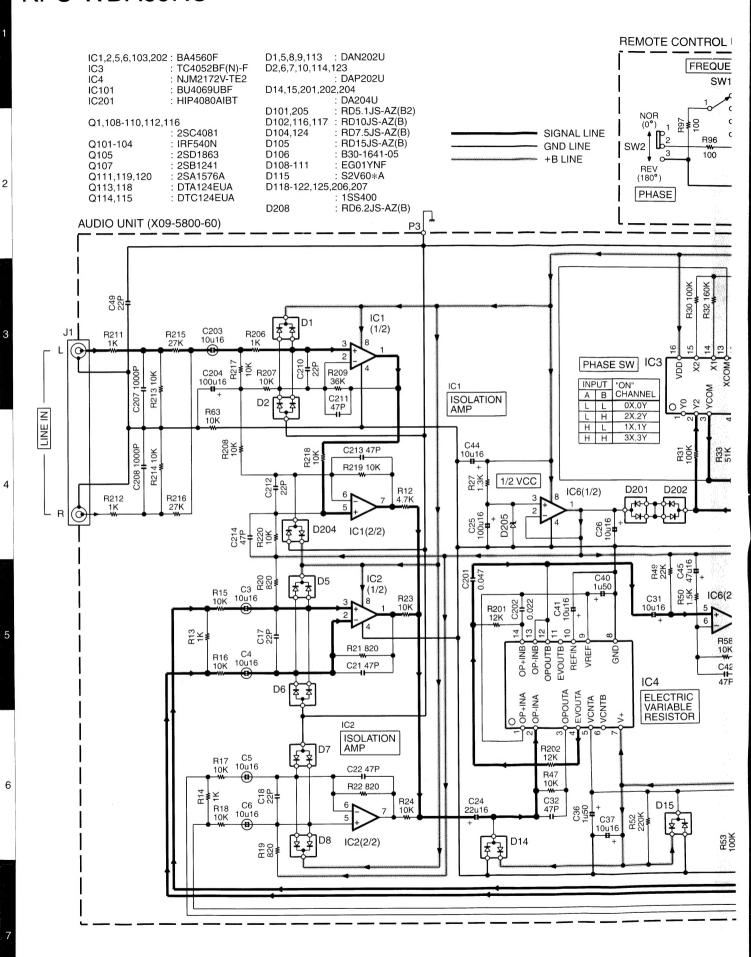
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X09-5800-60						
Ref. No.	Address					
IC1	5H					
IC2	5F					
IC3	зн					
IC4	4G					
IC5	3G					
IC6	4G					
IC101	2H					
IC103	2F					
IC201	2E					
IC202	4H					
Q1	4G					
Q101	4B					
Q102	3C					
Q103	3D					
Q104	3C					
Q105	3F					
Q107	4F					
Q108	5F					
Q109	5E					
Q110	2G					
Q111	3F					
Q112	3F					
Q113	2G					
Q114	5E					
Q115	5E					
Q116	5E					
Q118	3D					
Q119	3F					
Q120	4F					

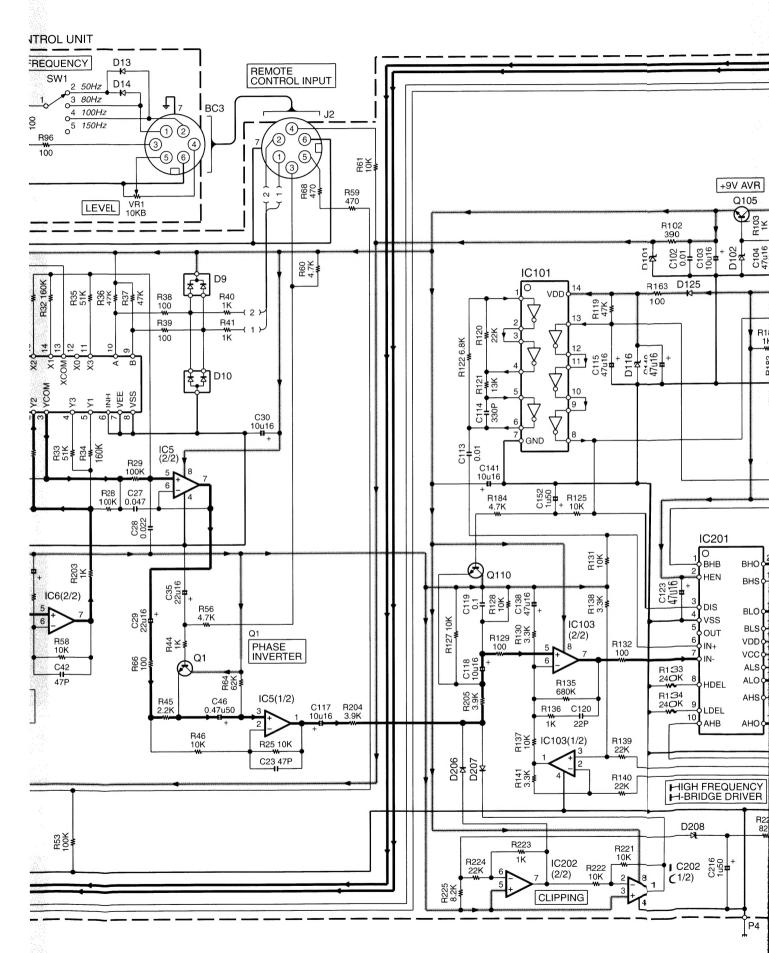
Refer to the schematic diagram for the values of resistors and capacitors.



С

Ε

6

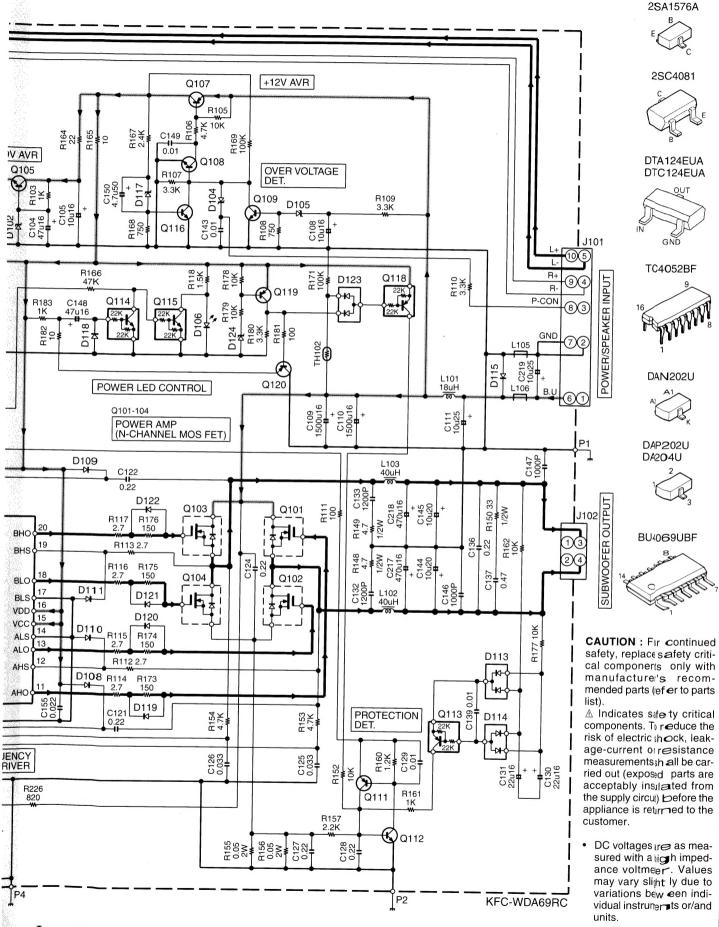


Н

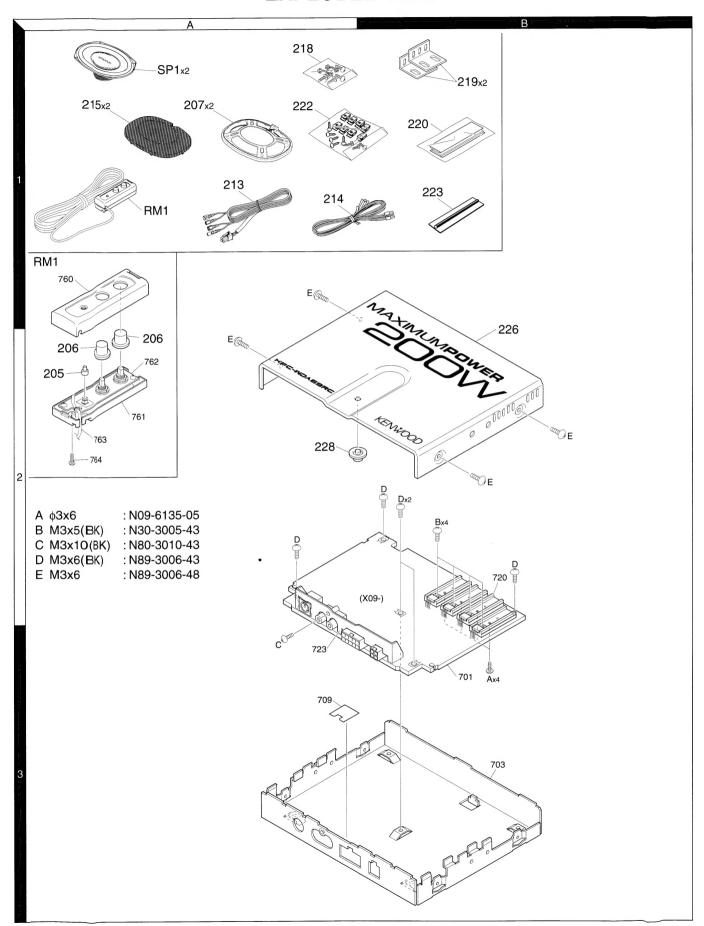
2

4

KFC-WDA69RC



EXPLODED VIEW



PARTS LIST

* New parts
Parts without Parts No. are not supplied.
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Teile ohne Parts No. werden nicht geliefert.

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation						
	KFC-WDA69RC										
RM1	1A	*	* A70-0416-08 REMOTE CONTROLLER AS								
- - 207	1A	*	B46-0100-50 B61-1203-00 B06-1779-08	WARRANTY CARD INSTRUCTION MANUAL GRILLE							
213 214	1A 1A	*	E30-7048-08 E30-7049-08	CORD WITH CONNECTOR(3.5M) DC CORD (6M, GND : 1.5M)							
215 F1,2	1A 1A	*	F09-2003-08 F52-0004-05	PROTECTOR FUSE (5A)							
		* *	H51-2037-08 H51-2054-08 H61-0616-08	ITEM CARTON CASE ITEM CARTON CASE OUTER CARTON CASE							
220 223	1B 1A	*	J69-0148-08 J69-0159-08	FASTENER ADHESIVE TAPE							
205 206	2A 2A		K27-0212-08 K29-0575-08	KNOB (BUTTON) KNOB							
222	1A	*	N99-2148-08	SCREW SET							
SP1	1A	*	T10-1243-08	WOOFER							
AMPLIFIER (W03-5042-08)											
226	2B	*	A01-2840-02	METALLIC CABINET							
228	2B		B19-2225-04	LIGHTING BOARD							
-		* * * *	H11-1547-04 H12-2721-04 H25-0338-04 H54-3143-03 H64-2741-03	POLYSTYRENE FOAMED BOARD PACKING FIXTURE PROTECTION BAG ITEM CARTON CASE OUTER CARTON CASE							
219	1A	*	J22-0054-14	MOUNTING HARDWARE							
218 C D E	3A * 2B *		N99-1753-05 N80-3010-43 N89-3006-43 N89-3006-48	SCREW SET PAN HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW							
			AUDIO UNIT ((X09-5800-60)							
C3-6 C17,18 C21-23 C24 C25		*	C90-5554-05 CC73GCH1H220J CC73GCH1H470J C90-5575-05 C90-5578-05	ELECTRO 10UF 16WV CHIP C 22PF J CHIP C 47PF J ELECTRO 22UF 16WV ELECTRO 100UF 16WV							
C26 C27 C28 C29 C30,31			C90-5574-05 CF92FV1H473J CF92FV1H223J C90-5575-05 C90-5574-05	ELECTRO 10UF 16WV MF-C 0.047UF J MF-C 0.022UF J ELECTRO 22UF 16WV ELECTRO 10UF 16WV							
C32 C35 C36 C37 C40			CC73GCH1H470J C90-5575-05 C90-5601-05 C90-5574-05 C90-5601-05	CHIP C 47PF J ELECTRO 22UF 16WV ELECTRO 1UF 50WV ELECTRO 10UF 16WV ELECTRO 1UF 50WV							

Ref. No.	d	. N	Parts No.		Description	1	Desti
C41 C42 C44 C45 C46		*	C90-5574-05 CC73GCH1H470J C90-5574-05 C90-5577-05	ELECTRO CHIP C ELECTRO ELECTRO ELECTRO	47PF 10UF 47UF	16WV J 16WV 16WV 50WV	
C49 C102 C103 C104 C105			CC45FCH1H220J CK73GB1H103K C90-5574-05 C90-5577-05 C90-5574-05	CERAMIC CHIP C ELECTRO ELECTRO ELECTRO	22PF 0.010UF 10UF 47UF 10UF	J K 16WV 16WV 16WV	
C108 C109,110 C111 C113 C114		*	000.00.010	ELECTRO ELECTRO ELECTRO CHIP C CHIP C	10UF 1500UF 10UF 0.010UF 330PF	16WV 16WV 25WV K J	
C115 C117,118 C119 C120 C121,122			C90-5577-05 C90-5574-05 CK73GB1H104K CC73GCH1H220J CF92FV1H224J	ELECTRO ELECTRO CHIP C CHIP C MF-C	47UF 10UF 0.10UF 22PF 0.22UF	16WV 16WV K J J	
C123 C124 C125,126 C127,128 C129			C90-5577-05 CF92FV1H224J CF92FV1H333J CK73FB1C224K CK73GB1H103K	ELECTRO MF-C MF-C CHIP C CHIP C	47UF 0.22UF 0.033UF 0.22UF 0.010UF	16WV J J K K	
C130,131 C132,133 C136 C137 C138			C90-5575-05 CF92FV1H122J CF92FV1H224J CF92FV1H474J C90-5577-05	ELECTRO MF-C MF-C MF-C ELECTRO	22UF 1200PF 0.22UF 0.47UF 47UF	16WV J J J 16WV	
C139 C140 C141 C143 C144,145		*	CK73GB1H103K C90-5577-05 C90-5574-05 CF92FV1H103J C90-5675-05	CHIP C ELECTRO ELECTRO MF-C ELECTRO	0.010UF 47UF 10UF 0.010UF 10UF	K 16WV 16WV J 20WV	
C146,147 C148 C149 C150 C152		*	CF92FV1H102J C90-5577-05 CK73GB1H103K C90-5604-05 C90-5601-05	MF-C ELECTRO CHIP C ELECTRO ELECTRO	1000PF 47UF 0.010UF 4.7UF 1UF	J 16WV K 50WV 50WV	
C155 C201 C202 C203 C204		*	CK73GB1H223K CF92FV1H473J CF92FV1H223J C90-5554-05 C90-5578-05	CHIP C MF-C MF-C ELECTRO ELECTRO	0.022UF 0.047UF 0.022UF 10UF 100UF	K J 16WV 16WV	
C207,208 C210 C211 C212 C213,214			CK45FB1H102K CC73GCH1H220J CC73GCH1H470J CC73GCH1H220J CC73GCH1H470J	CERAMIC CHIP C CHIP C CHIP C CHIP C	1000PF 22PF 47PF 22PF 47PF	J J K	
C216 C217,218 C219		*	C90-5601-05 C90-5581-05 C90-5585-05	ELECTRO ELECTRO ELECTRO	1UF 470UF 10UF	50WV 16WV 25WV	
1		*	E63-0900-05	PIN JACK			

PARTS LIST

* New parts

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AUDIO UNIT (X09-5800-60)

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation	Ref. No.	A d	N e W	Parts No.	D	escriptio	n	Dest natio
J2 J101 J102 P1-4			E56-0812-05 E08-1005-05 E58-0972-05 E23-0745-05	CYLINDRICAL RECEPTACLE RECTANGULAR RECEPTACLE RECTANGULAR RECEPTACLE TERMINAL		R122 R125 R127,128 R129 R130			RK73GB2A682J RK73GB2A103J RK73GB2A103J RK73GB2A101J RK73GB2A332J	CHIP R CHIP R CHIP R CHIP R CHIP R	6.8K 10K 10K 100 3.3K	J 1/10 J 1/10 J 1/10 J 1/10 J 1/10	ow ow ow
L101 L102,103 L105,106			L33-1937-05 L33-1936-05 L92-0382-05	CHOKE COIL CHOKE COIL FERRITE CORE		R131 R132 R133,134			RK73GB2A103J RK73GB2A101J RD14BB2C244J	CHIP R CHIP R RD	10K 100 240K	J 1/16 J 1/16)W
A B	3B 2B	*	N09-6135-05 N30-3005-43	TAPTITE SCREW PAN HEAD MACHINE SCREW		R135 R136			RK73GB2A684J RK73GB2A102J	CHIP R CHIP R	680K 1.0K	J 1/1 J 1/1)W
R12 R13,14 R15-18 R19-22 R23-25			RK73GB2A472J RD14BB2C102J RD14BB2C103J RD14BB2C821J RK73GB2A103J	CHIP R 4.7K J 1/10W RD 1.0K J 1/6W RD 10K J 1/6W RD 820 J 1/6W CHIP R 10K J 1/10W		R137 R138 R139,140 R141 R148,149			RK73GB2A103J RK73GB2A332J RK73GB2A223J RK73GB2A332J RD14DB2H4R7J	CHIP R CHIP R CHIP R CHIP R SMALL-RD	10K 3.3K 22K 3.3K 4.7	J 1/10 J 1/10 J 1/10 J 1/10 J 1/20)W)W)W
R27 R28-31 R32 R33 R34			RK73GB2A132J RK73GB2A104J RK73GB2A164J RK73GB2A513J RK73GB2A164J	CHIP R 1.3K J 1/10W CHIP R 100K J 1/10W CHIP R 160K J 1/10W CHIP R 51K J 1/10W CHIP R 160K J 1/10W		R150 R152 R153,154 R155,156 R157			RD14DB2H330J RK73GB2A103J RD14BB2C472J R92-2105-05 RK73GB2A222J	SMALL-RD CHIP R RD RD CHIP R	33 10K 4.7K 0.05 2.2K	J 1/2' J 1/10 J 1/6' K 2W J 1/10)W N
R35 R36,37 R38,39 R40,41 R44			RK73GB2A513J RK73GB2A473J RK73GB2A101J RD14BB2C102J RK73GB2A102J	CHIP R 51K J 1/10W CHIP R 47K J 1/10W CHIP R 100 J 1/10W RD 1.0K J 1/6W CHIP R 1.0K J 1/10W		R160 R161 R162 R163 R164			RK73GB2A122J RK73GB2A102J RK73GB2A103J RD14BB2C101J RD14NB2E220J	CHIP R CHIP R CHIP R RD RD	1.2K 1.0K 10K 100 22	J 1/10 J 1/10 J 1/10 J 1/60 J 1/4	OW OW N
R45 R46,47 R49 R50 R52			RK73GB2A222J RK73GB2A103J RK73GB2A223J RK73GB2A152J RK73GB2A224J	CHIP R 2.2K J 1/10W CHIP R 10K J 1/10W CHIP R 22K J 1/10W CHIP R 1.5K J 1/10W CHIP R 220K J 1/10W		R165 R166 R167 R168 R169			RD14BB2C100J RK73GB2A473J RK73GB2A242J RK73GB2A751J RK73GB2A104J	RD CHIP R CHIP R CHIP R CHIP R	10 47K 2.4K 750 100K	J 1/6' J 1/1' J 1/1' J 1/1' J 1/1')W)W)W
R53 R56 R58 R59 R60			RK73GB2A104J RD14BB2C472J RK73GB2A103J RD14BB2C471J RD14BB2C472J	CHIP R 100K J 1/10W RD 4.7K J 1/6W CHIP R 10K J 1/10W RD 470 J 1/6W RD 4.7K J 1/6W		R171 R173-176 R177-179 R180 R181			RK73GB2A104J RK73GB2A151J RK73GB2A103J RK73GB2A332J RK73GB2A101J	CHIP R CHIP R CHIP R CHIP R CHIP R	100K 150 10K 3.3K 100	J 1/10 J 1/10 J 1/10 J 1/10 J 1/10	W W W
R61 R63 R64 R66 R68			RD14BB2C103J RD14BB2C103J RK73GB2A623J RK73GB2A101J RD14BB2C471J	RD 10K J 1/6W RD 10K J 1/6W CHIP R 62K J 1/10W CHIP R 100 J 1/10W RD 470 J 1/6W		R182 R183 R184 R201,202 R203			RK73GB2A100J RK73GB2A102J RK73GB2A472J RK73GB2A123J RK73GB2A102J	CHIP R CHIP R CHIP R CHIP R CHIP R	10 1.0K 4.7K 12K 1.0K	J 1/10 J 1/10 J 1/10 J 1/10 J 1/10	W W W
R102 R103 R105 R106 R107			RD14BB2C391J RD14BB2C102J RK73GB2A103J RK73GB2A472J RK73GB2A332J	RD 390 J 1/6W RD 1.0K J 1/6W CHIP R 10K J 1/10W CHIP R 4.7K J 1/10W CHIP R 3.3K J 1/10W		R204,205 R206 R207,208 R209 R211,212			RK73GB2A392J RD14BB2C102J RD14BB2C103J RD14BB2C363J RD14BB2C102J	CHIP R RD RD RD RD RD	3.9K 1.0K 10K 36K 1.0K	J 1/16 J 1/6 J 1/6 J 1/6 J 1/6	N N N
R108 R109 R110 R111 R112,113		*	RK73GB2A751J RK73GB2A332J RD14BB2C332J RK73GB2A101J RK73GB2A2R7J	CHIP R 750 J 1/10W CHIP R 3.3K J 1/10W RD 3.3K J 1/6W CHIP R 100 J 1/10W CHIP R 2.7 J 1/10W		R213,214 R215,216 R217-220 R221,222 R223			RD14BB2C103J RD14BB2C273J RD14BB2C103J RK73GB2A103J RK73GB2A102J	RD RD RD CHIP R CHIP R	10K 27K 10K 10K 1.0K	J 1/6 J 1/6 J 1/6 J 1/1 J 1/1	W W DW
R114-117 R118 R119 R120 R121			RD14BB2C2R7J RK73GB2A152J RK73GB2A473J RK73GB2A223J RK73GB2A133J	RD 2.7 J 1/6W CHIP R 1.5K J 1/10W CHIP R 47K J 1/10W CHIP R 22K J 1/10W CHIP R 13K J 1/10W		R224 R225 R226 W101-136			RK73GB2A223J RK73GB2A822J RK73GB2A821J R92-1252-05	CHIP R CHIP R CHIP R CHIP R	22K 8.2K 820 0 OHM	J 1/1/ J 1/1/ J 1/1/ J 1/1/)W)W

E: Europe K: North America M: Other Areas W: Without Europe

PARTS LIST

* New parts

Parts without Parts No. are not supplied.

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. ď Parts No. Description nation D1 DAN202U DIODE D2 DAP202U DIODE D5 DAN202U DIODE D6,7 DAP202U DIODE D8,9 DAN202U DIODE D10 DAP202U DIODE D14.15 DA204U DIODE RD5.1JS-AZ (B2) ZENER DIODE D101 * D102 * RD10JS-AZ (B) ZENER DIODE D104 * RD7.5JS-AZ (B) ZENER DIODE D105 RD15JS-AZ (B) ZENER DIODE * B30-1641-05 D106 LFD D108-111 DIODE * EG01YNF D113 DAN202U DIODE D114 DAP202U DIODE D115 S2V60*A DIODE D116,117 * RD10JS-AZ (B) ZENER DIODE D118-122 **1SS400** DIODE D123 DAP202U DIODE D124 RD7.5JS-AZ (B) ZENER DIODE

AUDIO UNIT (X09-5800-60)

Ref. No.	Add	N e w	Parts No.	Description	Desti- nation
D206,207 D208 IC1,2 IC3 IC4		*	1SS400 RD6.2JS-AZ (B) BA4560F TC4052BF (N)-F NJM2172V-TE2	DIODE ZENER DIODE IC MOS-IC ANALOGUE IC	
IC5,6 IC101 IC103 IC201 IC202		*	BA4560F BU4069UBF BA4560F HIP4080AIBT BA4560F	IC IC (INVERTER X6) IC DI BI-POLAR IC IC	
Q1 Q101-104 Q105 Q107 Q108-110		*	2SC4081 IRF540N 2SD1863 2SB1241 2SC4081	TRANSISTOR FET TRANSISTOR TRANSISTOR TRANSISTOR	
Q111 Q112 Q113 Q114,115 Q116			2SA1576A 2SC4081 DTA124EUA DTC124EUA 2SC4081	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	
Q118 Q119,120 TH102		*	DTA124EUA 2SA1576A PTFL04BD222Q2	TRANSISTOR TRANSISTOR POSITIVE RESISTOR	

E: Europe

D125

D204

D205

D201,202

K: North America M: Other Areas

1SS400

DA204U

DA204U

RD5.1JS-AZ (B2)

DIODE

DIODE

DIODE

ZENER DIODE

W: Without Europe

SPECIFICATIONS

A	m	р	u	nit

Maximum Output	200W
Frequency Response (System	m)30Hz~150Hz
Signal to Noise Ratio	85dB
Low-Pass Filter Frequency	. 50, 80, 100, 150Hz (4steps)
Phase	0°, 180°
Sensitivity / input impedance	$210mV/10k\Omega$ (RCA pin jack)
	$4.2V / 1k\Omega$ (Speaker input)
Operating Voltage	14.4V (10.5V~16V allowable)
Bridged Power Output	80W X 2 (0.8% THD)
Maximum current consumption	on 10Å
Fuse capacity	

Speaker unit	
Maximum input	200W
Impedance	1.5Ω
Woofer	153 x 229 rmm Cone type
	255 x 184 x 110.4 mm
	(10-1/16 x 7-1/4 x 4-3/8 inch)
O	

General

Net Weight (Amp unit & Speaker units) 4.0kg (8.8lbs)

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed wit hout notice.

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